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10/670,245	09/26/2003	Masaru Sugano	031198	8594

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EXAMINER	
ROBERTS, JESSICA M	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/670,245	SUGANO ET AL.	
	Examiner	Art Unit	
	Jessica Roberts	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/23/2007*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Acknowledgment of Amendments

The amendment filed on 07/18/2007 overcomes the following rejection(s)/objections:

Claim 3 has overcome the objection for minor informalities.

Claims 18-20 have over come the 35 U.S.C §1.75 (c) rejection in the previous non-final office action, which stated that the claims were in improper form for a multiple dependent claim.

Response to Arguments

1. Applicant's argument for unamended claim 1 is not persuasive that Chakraborty does not disclose or suggest the detector for detecting shot density and the detector for detecting motion intensity and the dynamic/static scene detector for classifying respective shots based on shot density and motion intensity. The examiner respectfully disagrees. Chakraborty discloses examining frame-to-frame intensity changes at the pixel level (column 1 line 53-54), pixel activity would be indicative of motion. As to addressing the limitation, "shot density", Chakraborty discloses a predefined shot duration (column 13 line 15 to 35); which is equivalent to the shot density.

2. Applicants' argument for unamended claim 4 is not persuasive that Chakraborty does not disclose the "slow scene detector for classifying the target shot into a slow scene of the similar shot based on motion intensity of the target shot and the similar shot. The examiner respectfully disagrees. Charkraborty teaches that if any window has a duration that exceeds the predefined duration threshold, it is assumed that the

window represents motion and, consequently, all points in such a window are turned "off". All the remaining windows are then identified as a candidate for gradual scene changes, (Chakraborty, column 14 line 29-35). Chakraborty further discloses after the candidate scene changes are identified, a determination is made as to whether the distance between any candidate scene changes are less than the minimum shot durations. This eliminates the existence of two consecutive scene changes, either abrupt or gradual that are close in proximity, (Chakraborty, column 14 line 36-43).

3. Applicants argument for unamended claim 9 is not persuasive that the invention recited in claim 9 differs from Chakraborty in that the histogram recited in claim 9 relates to a motion direction of shots while the histogram of Chakraborty relates to intensity distribution of an image. The examiner respectfully disagrees. Chakraborty disclose the camera might remain fixed or it might undergo one the characteristics directional motion, i.e., panning (column 1 line 45-46). Panning would include the direction of the motion from the camera.

4. Applicants' argument for unamended claim 21 is not persuasive that the combination of Chakraborty and Gonsalves does not disclose or suggest "extracting and combining means for extracting and combining a plurality of highlight scene". The examiner respectfully disagrees. Chakraborty discloses a detector for detecting a highlight scene (gradual scene; column 8 line 8-11 and fig. 1:21). Chakraborty also discloses that if the interframe difference between two neighboring keyframes falls below a predetermined threshold, the corresponding shots are merged, (column 14 line 57-6).

5. Applicants arguments for unamended claim 21 is not persuasive that the combination of Chakraborty and Gonsalves does not disclose or suggest "wherein the inserting means makes a type of the video transition effect to be inserted different according to whether the highlight scenes to be combined are the dynamic scene or the static scene. The examiner respectfully disagrees. Gonsalves, Gonsalves discloses allowing the video editor to insert a video transition effect on a field/frame-by field/frame basis in order to improve accuracy of the effect between two frames (column 3 lines 11-14, line 24, column 4 line 65-67, column 5 lines 50-52 and fig. 3b: 320a-320b).

6. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection for motion vectors instead of motion representation.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-6, 9-14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Chakraborty et al., US-7, 110,454.

Re **claim 1**, Chakraborty discloses a scene classification apparatus (fig. 1) of video for segmenting video into shot (col. 5, line 1) and classifying each scene

composed of one or more continuous shots based on a content of the scene (continuous units or “shots” col. 1 line 35-37, col. 5, lines 16-24; Note: the “metrics” are used for scene classification), comprising: a detector for detecting shot density (histogram difference metric, a histogram is a graphical display of tabulated frequencies and fig. 2A: 203) DS of the video; a detector for detecting motion intensity (interframe difference metric col. 4 line 22-23, col. 14 lines 30-32, and fig. 2A: 202) of the respective shots; and a dynamic/static scene detector (metric computation col. 5 line 9-11, fig. 1:14-17 and fig. 2A) for classifying the respective shots into a dynamic scene (abrupt scene, see abstract, furthermore, the meaning of abrupt is interpreted as sudden or fast) with much motions or a static scene with little motions (gradual scene, see abstract, furthermore, the meaning of gradual is interpreted as slow and not moving quickly) based on the shot density (histogram difference, a histogram is a graphical display of tabulated frequencies) and the motion intensity (interframe difference col. 4 line 22-23 and col. 14 lines 30-32).

Regarding **claim 2**, Chakraborty discloses the scene classification apparatus of video according to claim 1, wherein the dynamic/static (metric computation col. 5 lines 9-11, fig. 1:14-17 and fig. 2A) scene detector classifies a shot whose shot density (histogram difference, a histogram is a graphical display of tabulated frequencies) is larger than first reference density and whose motion intensity is stronger than first reference intensity (frame to frame intensity col. 1 lines 50-53) into the dynamic (abrupt col. 12, line 67; col. 13 line 1-3) scene.

Regarding **claim 3**, Chakraborty discloses the scene classification apparatus of video according to claim 1, wherein the dynamic/static scene detector (metric computation col. 5 lines 9-11, fig. 1:14-17 and fig. 2A) classifies a shot whose shot density (histogram difference, a histogram is a graphical display of tabulated frequencies) is smaller than second reference density and whose motion intensity (histogram difference computation fig. 1:16) is weaker than second reference intensity into the dynamic scene (gradual scene).

Regarding **claim 4**, Chakraborty discloses a scene classification apparatus (fig. 1) of video for segmenting video into shots (col. 5, line 1) and classifying each scene composed of at least one continued shot based on a content of the scene (continuous units or "shots" col. 1 line 35-37, col. 5, lines 16-24; <u>Note</u>: the "metrics" are used for scene classification), comprising: an extractor for extracting shots (validation module col. 7 lines 54-55) similar to a current target shot (candidate and non-candidate scene change locations (frames) col. 7 lines 36-38 and fig. 1:19) from shots after a shot before the target shot (compares neighboring keyframes col. 7 line 55) only by a predetermined interval (predetermined threshold col. 14 line 59); and a slow (gradual) scene detector (interframe variance difference col. 7 line 48-50) for classifying the target shot (candidate and non-candidate scene change locations (frames) col. 7 lines 39-38) into a slow scene (gradual) of the similar shot based on motion intensity (interframe difference col. 14 lines 30-32) of the target shot (candidate and non-candidate scene change locations (frames) col. 7 lines 36-38 and fig. 1:19) and the similar shot (key frame col. 14 lines 52-57 and fig 2B: 229).

Regarding **claim 5**, Chakraborty discloses the scene classification apparatus of video according to claim 4, wherein the slow (gradual) scene detector (interframe variance difference metric computation col. 7 line 48-50 and fig. 1: 17) classifies the target shot (candidate and non-candidate scene change locations (frames) col. 7 lines 36-38 and fig. 1:19) into the slow scene (gradual scene) of the similar shot when the motion intensity (interframe difference col. 14 lines 30-32) of the similar shot is stronger than the motion intensity (interframe difference col. 14 lines 30-32) of the target shot (candidate and non-candidate scene change locations (frames) col. 5 line 20-24).

Regarding **claim 6**, Chakraborty further discloses comprising a first highlight (gradual) scene detector (shot list database col. 8 line 8-11 fig. 1:21) for classifying a scene composed of a plurality of shots continued just before (neighboring key frames col. 7 line 55-59) the slow (gradual) scene into a first highlight (gradual) scene.

Regarding **claim 9**, Chakraborty discloses a scene classification apparatus (fig. 1) of video for segmenting video into shots (col. 5, line 1) and classifying each scene composed of at least one continued shot based on a content of the scene (continuous units or "shots" col. 1 line 35-37, col. 5, lines 16-24; Note: the "metrics" are used for scene classification), comprising: an extractor for extracting shots (validation module col. 7 lines 54-55), comprising: detector for detecting a histogram relating to motion directions of the shots (histogram difference metric col. 8 line 51-56 and col. 9 line 4-5); and a detector for detecting a scene in which a camera operation has been performed based on the histogram of motion direction (interframe difference col. 4 lines 16-17).

Regarding **claim 10**, Chakraborty discloses the scene classification apparatus of video according to claim 9, further comprising a zooming scene detector (interframe variance difference metric col. 4 lines 15-17) for, when the histogram of motion direction (histogram difference metric col. 8 lines 54-57) is uniform (col. 8 lines 62-63, i.e. "normal' intensity distribution) and a number of elements of respective bins is larger than a reference number of elements (each bin corresponding to an intensity range col. 8 line 53), classifying its shot into a zooming scene (gradual scene).

Regarding **claim 11**, Chakraborty discloses the scene classification apparatus of video according to claim 9, further including: detector for detecting spatial distribution (variance difference furthermore, the variance difference detects the difference within a frame where spatial distribution takes place) of motion of each shot; and a panning scene detector (interframe and histogram difference metric col. 7 lines 46-48) for detecting whether the respective shots are a panning scene (abrupt scene) based on the histogram of motion direction (histogram difference metric, the histogram as well as the interframe difference metric are processed to validate candidate scene changes as abrupt col. 7 lines 45-48 and fig. 2A: 202-203) and the spatial distribution of motion (variance difference).

Regarding **claim 12**, Chakraborty discloses the scene classification apparatus of video according to claim 11, wherein when the histogram of motion (histogram difference metric) direction is concentrated in one direction and the spatial distribution (variance difference furthermore, the variance difference detects the difference within a frame where spatial distribution takes place) of motion is uniform (typically assumed not

to change from frame to frame col. 12 lines 33-34), the panning scene detector (interframe and histogram difference metric col. 7 lines 46-48) classifies shot into the panning (abrupt) scene.

Regarding **claim 13**, Chakraborty discloses a scene classification apparatus (fig. 1) of video for segmenting video into shots (col. 5, line 1) and classifying each scene composed of one or more shots based on a content of the scene (continuous units or "shots" col. 1 line 35-37, col. 5, lines 16-24; Note: the "metrics" are used for scene classification), comprising: an extractor for extracting shots (validation module, col. 7 lines 54-55), comprising: a detector for detecting a shot density DS (histogram difference metric, a histogram is a graphical display of tabulated frequencies) of the video; and a commercial scene detector (interframe and histogram difference metric, col. 7 lines 46-48) for detecting a commercial scene (abrupt scene) by comparing a shot density (minimum predefined shot duration col. 13 lines 18-35) detected during a predetermined interval with a predetermined reference shot density (column 14 line 21-27).

Regarding **claim 14**, Chakraborty discloses a scene classification apparatus of video for segmenting video into shots and classifying each scene composed of one or more continuous (continuous units or "shots", col. 1 line 35-37) shots based on a content of the scene, comprising: a detector for detecting a number of shot boundaries (threshold levels, col. 5 lines 22-23, furthermore, histograms are the most common method used to detect shot boundaries) of the video; and a commercial scene detector (interframe and histogram difference metric, col. 7 lines 46-48) for detecting a

commercial scene (abrupt scene. Chakraborty further discloses video in education and commerce; a video in commerce would be a commercial scene) by comparing a number of shot boundaries (threshold level col. 5 line 22-23) detected during a predetermined interval with a predetermined reference number (column 14 line 21-27).

Regarding **claim 16**, Chakraborty discloses the scene classification apparatus of video according to claim 11, wherein the video are compressed data (video source may be either compressed or decompressed video data, col. 6 lines 45-46), and the spatial distribution (variance difference, referring to within the frame, furthermore, MPEG has spatio temporal locator capabilities) of motion is detected by using a value of a motion vector of a predictive coding image existing in each shot (MPEG, col. 6 lines 51-60, furthermore, MPEG is a predictive image coding technique that incorporates tabulating motion vector values).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty (US Patent 7,110,454) as applied to claim 6 above, and further in view of Blanchard US Patent 6347114).

Regarding **claim 7**, Chakraborty fails to teach a detector for detecting the intensity of audio signals accompanied by the video. Blanchard teaches a detector for detecting intensity of an audio signal (audio levels col. 3 lines 37-51) accompanied by the video (col. 2 lines 27-29) into shot. Blanchard also teaches detector for classifying a scene composed of a plurality of shots continued before and after a shot with the audio signal intensity stronger than the predetermined intensity (col. 2 lines 17-22) into a second highlight scene (gradual scene).

Taking the combined teaching of Chakraborty and Blanchard as a whole, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to incorporate detecting the intensity of audio signals accompanied by the video as claimed for the benefit of detecting scene changes that may generally be identified and distinguished from mere shots changes where the audio level will generally remain the same.

Regarding **Claim 8**, the combination of Chakraborty and Blanchard as whole further teaches everything claimed as applied above; see claims 7. In addition Chakraborty teaches a commercial scene detector (interframe and histogram difference metric col. 7 lines 46-48, Chakraborty) for classifying the respective shots into a

commercial scene (abrupt scene), wherein a scene classified into a scene other than the first highlight scene (gradual), the second highlight scene (gradual scene) and the commercial scene (abrupt scene) is classified into the highlight scene (gradual).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Regarding **claim 15**, Chakraborty discloses the scene classification apparatus of video according to claim 1 or 4, wherein the video are compressed data (video source may be either compressed or decompressed video data, col. 6 lines 45-46). However, Chakraborty is silent in regards to the motion intensity is detected by using a value of a motion vector of a predictive coding image existing in each shot.

However, Park teaches motion intensity is detected by using a value of a motion vector of a predictive coding image existing in each shot (column 16 line 20-35 and fig. 14).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Chakraborty with Parks' teaching of motion intensity detected by motion vectors to increase the speed and efficiency of data search, it has been researched and developed new search techniques which include the widely-known character-based search technique and have composite information attribute, thereby being suitable for efficient data search of multimedia (column 1 line 30-36).

Regarding **claim 17**, the combination of Chakraborty and Park as a whole further teaches everything claimed as applied above, see claims 1 or 4. In addition Chakraborty discloses the scene classification apparatus of video according to claim 9, wherein the video are compressed data video source may be either compressed or decompressed video data, col. 6 lines 45-46). Chakraborty is silent in regards to the histogram of motion direction is detected by using a value of a motion vector of a predictive coding image existing in each shot.

However, Park teaches the histogram of motion direction is detected by using a value of a motion vector of a predictive coding image existing in each shot (Park, column 16 line 63 to column 17 line 10, column 22 line 31-49, column 18 line 29-31, fig. 9 and fig. 14).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Chakraborty with Parks' teaching of a histogram of motion direction is detected by using a value of a motion vector of a predictive coding image existing in each shot to increase the speed and efficiency of data search, it has been researched and developed new search techniques which include the widely-known character-based search technique and have composite information attribute, thereby being suitable for efficient data search of multimedia (column 1 line 30-36).

Regarding **claim 18**, Chakraborty discloses the scene classification apparatus of video according to claims 1 and 4, wherein the video are uncompressed data (video source may be either compressed or decompressed video data, col. 6 lines 45-46). However, Chakraborty is silent in regards to the motion intensity (is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots.

However, Park teaches the motion intensity (is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots (Park, column 11, line 66 to column 12 line 7 and column 24 line 55-60, and column 18 line 29-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Chakraborty with the Parks' teaching of the motion intensity (is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective

shots, to increase the speed and efficiency of data search, it has been researched and developed new search techniques which include the widely-known character-based search technique and have composite information attribute, thereby being suitable for efficient data search of multimedia (column 1 line 30-36).

Regarding **claim 19**, Chakraborty discloses the scene classification apparatus of video according to claims 1 or 4, wherein the video are uncompressed data (video source may be either compressed or decompressed video data, col. 6 line 45-46). However, Chakraborty is silent in regards to the spatial distribution of motion is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots.

However, Park teaches the spatial distribution of motion is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots (Park, column 23 line 20-30. Further Park discloses the motion direction is computed from the motion vector values, column 16 line 62-65 and column 18 line 29-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Chakraborty with Parks' teaching of spatial distribution of motion is detected by using a value of a motion vector representing a change in motion, to increase the speed and efficiency of data search, it has been researched and developed new search techniques which include the widely-known character-based search technique and have composite information attribute, thereby being suitable for efficient data search of multimedia (column 1 line 30-36).

Regarding **claim 20**, Chakraborty discloses the scene classification apparatus of video according to claims 1 and 4, wherein the video are uncompressed data (video source may be either compressed or decompressed video data, col. 6 line 45-46). Chakraborty is silent in regards to the histogram of motion direction (histogram difference metric) is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots.

However, Park teaches the histogram of motion direction is detected by using a value of a motion vector representing a change in motion predicted from a compared result of frames composing the respective shots (column 11 line 14-27, column 18 line 29-31 and fig. 1J).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Chakraborty with Parks' teaching of spatial distribution of motion is detected by using a value of a motion vector representing a change in motion, to increase the speed and efficiency of data search, it has been researched and developed new search techniques which include the widely-known character-based search technique and have composite information attribute, thereby being suitable for efficient data search of multimedia (column 1 line 30-36).

12. Claims 21-22 are rejected under 35 U.S.C 103(a) as being unpatentable over Chakraborty (US Patent 7,110,454) in view of Gonsalves US Patent (6,392,710).

Regarding **claim 21**, which is substantially the same as claim 1 in addition to the limitation of inserting a video transition effect into a combined portion of the respective

highlight scenes. Chakraborty fails to teach this aspect. However, the analysis and rejection of claim 1 apply here for common subject matter.

Gonsalves teaches allowing the video editor to insert a video transition effect on a field/frame-by-field/frame basis in order to improve accuracy of the effect (Gonsalves, special effect, col. 3 lines 11-14, line 24, between two frames col. 4, 65-67, col. 5 lines 50-52, and fig. 3b: 320a –320b).

Taking the combined teaching of Chakraborty and Gonsalves as a whole, it would have been obvious to one of ordinary skills in the art at the time the invention was made to utilize the technique of inserting a transition effect as taught in Gonsalves to improve its accuracy for video editing purposes.

Regarding **claim 22**, Chakraborty discloses a video processing system for generating a content-based visual summary of video to facilitate digital video indexing and browsing as well as a database for storing (col. 6 lines 34-40). Chakraborty fails to teach inserting transition effects, however, Gonsalves does (see discussion in claim 21).

Examiner's Note

The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. <u>W.L. Gore & associates, Inc. v. Garlock,</u>

Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed…." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Altunbasak et al., US-6,389; 168 Object based parsing and indexing of compressed video streams

Yang et al., US- 7, 042,512 Apparatus and method for adaptive motion compensated de-interlacing of video data

Puri et al., US-6,909,745 Content adaptive video encoder

Suzuki et al., US-2003/0067560 Method for coding data of a special effect

Divakaran et al., US-2003/000755 Method for summarizing a video using motion descriptors

Fincher et al., US-6, 449, 019 Real-time key frame effects using tracking information

Toebes et al., US-5,959,690 Method and apparatus for transitions and other special effects in digital motion

Xu et al., US-2002/0018594 Method and system for high-level structure analysis and event detection in domain specific videos

Kellock et al., US-2004/0027369 System and method for media reproduction

Liu et al., US-7, 058, 130 Scene change detection

Yokoyama et al., US-6, 456,660 Device and method of detecting motion vectors

Li et al., US-7, 035, 435 Scalable video summarization and navigation system and method

Sugano et al., US-6, 473, 459 Scene change detector

Yang et al., US-6, 895, 361 Adaptive motion estimation apparatus and method

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Roberts whose telephone number is (571) 270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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